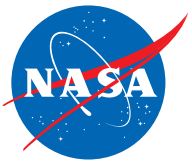


THE INNOVATION CATALYST



July 2022

IN THIS ISSUE:

- Q&A WITH BRYAN GEURTS
- DR. CHRISTYL JOHNSON
HONORED BY RECEIVING THE STRONG MEN
& WOMEN IN VIRGINIA HISTORY AWARD
- INNOVATOR HOUR
- FORGOTTEN MOON TREE
- IS IT TIME TO DISCLOSE YOUR
NTR NOW?
- BOOK OF THE MONTH

TECH TRANSFER TIP

with Administrative
Specialist Staci Steward:

"DEVELOPING SOFTWARE? AS SOON AS YOU DISCLOSE YOUR SOFTWARE INVENTION BY SUBMITTING YOUR NEW TECHNOLOGY REPORT (NTR), SUBMIT YOUR SOFTWARE FOR RELEASE VIA THE SOFTWARE RELEASE SYSTEM (SRS). LIKE OTHER TECHNOLOGY, NASA'S SOFTWARE TOOLS REQUIRE TRACKING AND USE TO MEET THEIR FULL POTENTIAL. SOFTWARE RELEASE IS A CRITICAL COMPONENT OF NASA'S CONGRESSIONALLY MANDATED TECHNOLOGY TRANSFER RESPONSIBILITY."



»» UPCOMING EVENTS:



INNOVATOR HOUR
TUESDAY, JULY 12, 2022
1:00–2:00 P.M.



with **BRYAN**GEURTS



Photo Credit: NASA

An Informed Inventor is a Smart Inventor

When contemplating licensing intellectual property (IP), there are many things an inventor needs to consider. To help readers understand more about the pursuit and enforcement of IP, the Innovation Catalyst sat down with Bryan Geurts, who has served as chief patent counsel at GSFC since 2007. As chief, he is responsible for the identification, protection, and strategic management of all IP at Goddard, including inventions, data rights, and software. Holder of a Juris Doctor Degree from Brigham Young University, Geurts has over 30 years of experience in the field of intellectual property law.

Why is the subject of IP important and what are the first things an inventor should understand?

I will start at the very beginning. Most important, other than the invention itself, is the reporting of that invention. If the inventor does not report their innovation using NASA Form 1679, then NASA probably has no official record of the invention. Therefore, if someone else comes along and independently invents it and files a patent application and receives a patent, that person then can preclude

NASA from using the very invention that the government has paid someone within the ranks of NASA to create. So, that is the first important reason every inventor, everyone who is developing a new technology, should report their new technology in a timely fashion.

Next, assuming SPO decides the innovation is commercially viable, my office reviews it to see if it includes patentable subject matter. If so, my office prepares and files a patent application. One of the great things about obtaining a patent is the kudos it provides the inventor. There is no better recognition than to have the U.S. Patent and Trademark Office proclaim to the world that your invention is new, unique, and no one else has done the same thing – or anything close enough to it - to prevent you from getting a patent, and therefore you deserve credit. And that is worth a lot.

Another great thing about a patent is the inventor receives a portion of the royalties when someone licenses the invention; this can be a nice supplement to your regular government income.

What if the inventor discovers that someone is infringing on their licensed patent? How does your office help them to enforce it or deal with that issue?

Good question. We encourage all technologists, inventors, engineers, scientists, or whoever is working with their technologies to please let us know as soon as possible that somebody else out there is doing the exact same thing. Number one, it might be that they are infringing on something that belongs to NASA, our patents. Number two, it might be that we are infringing on something that they have rights to. If that is case, then we want to know so that we can take the appropriate steps to get out from under that situation.

If it is somebody who is infringing upon NASA's intellectual property, we usually undertake action to make a legal determination that there is indeed an infringement of NASA property. We then typically send a cease-and-desist letter to the infringing party telling them stop at the peril of being sued. And if they continue to infringe and do not stop, then we take it to the Department of Justice (DOJ), and they file a lawsuit. DOJ has an Intellectual Property Task Force, and it handles all the intellectual property litigation for the government.

How important is timeliness of filing a patent?

Timeliness is incredibly important in the patent world as there are certain drop-dead dates, meaning there are dates that, if you let pass without certain actions, rights to the invention are irretrievably lost. Thus, you may have spent years inventing to only discover your invention has become public domain and NASA has no rights to protect it or prevent others from infringing on it. That can be disastrous because NASA builds a lot of our projects on intellectual property that we claim, and we protect. And, if we are not claiming and protecting it, others can step in and not just use it for themselves but can sometimes prevent us from using our own technologies that we developed.

The most important date to be aware of is a statutory requirement that provides one year period, from the time you disclose invention to the public, or put out there for sale, or published in an article, or in any way make it known to the world, to file your patent application. If you fail to file a patent application within that time frame, you lose your rights to patent your invention. That is the single

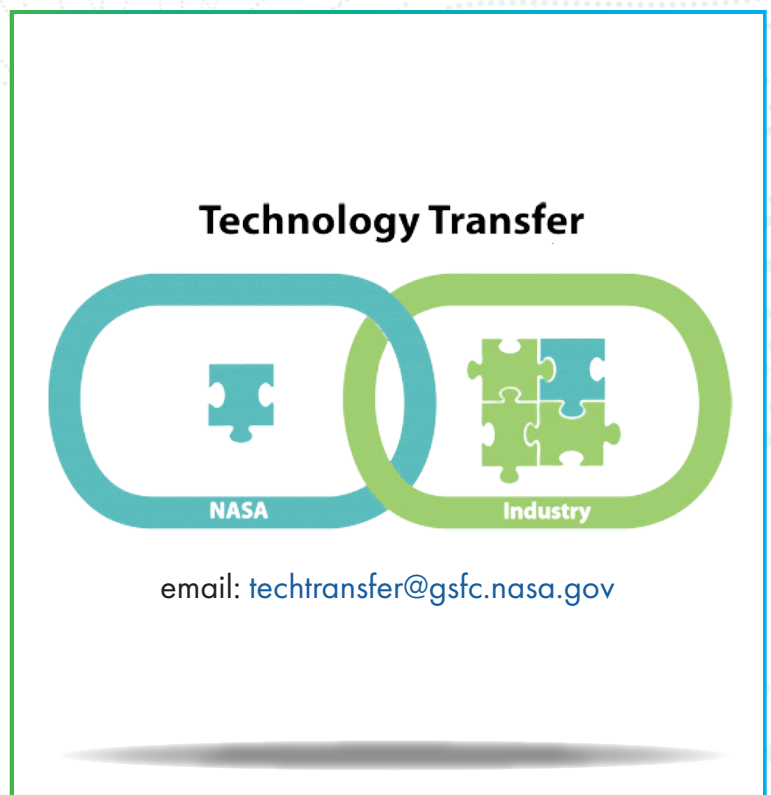
most important date. There are other dates as well, but that is the one every inventor needs to be aware of. So, before you think about disclosing it, you should probably come and talk to our office. We can take preliminary steps to prevent that "statutory bar" from occurring by filing a provisional patent application. That means we have met the requirement of filing, but we still have to perfect it and convert it into a non-provisional application within one year. The ensuing non-provisional application is ultimately what matures into a U.S. patent.

Sometimes partnering with Goddard involves access to an inventor's technology. How much is this a problem?

It's no problem if the inventor has the party to whom the invention is disclosed sign a non-disclosure agreement (NDA). Direct questions about NDA's to my office.

Anything else?

I will say this: please ask questions if you are not familiar with the process. If you are not sure how the process works, or not sure whether what you are proposing to do will be a disclosure of your invention, or not sure exactly when to file your NTR, please come and ask. Our door is always open. We appreciate when inventors come and talk to us. Because an informed inventor is the best possible kind of inventor for us to deal with. It allows us as the patent attorneys to help you protect your invention.



CHRISTYL JOHNSON

Recognized for Her Leadership and Lasting Impact

On June 16, the Library of Virginia and Dominion Energy Virginia bestowed Dr. Christyl C. Johnson, Goddard's deputy director for technology and research investments as honoree of the Strong Men & Women in Virginia History award. This recognition honors distinguished African Americans, past and present, who made "noteworthy contributions to the Commonwealth of Virginia, the nation, and their profession."

"I am honored to be recognized as an important figure in Virginia's history," said Johnson. "In looking at the many accomplishments of the past and current honorees, I am thrilled to be deemed a strong representative for the empowerment of today's youth."

Dr. Johnson was honored for the award along with Professional Basketball Player Robert L. Dandridge, Labor Leader Samuel H. Clark, Baptist Minister Reverend B. H. Hester, Public Historian Christy S. Coleman and Civil Rights Attorney Samuel W. Tucker.

"Through activism and rising to be leaders in their fields, these six honorees have uplifted and inspired," said Bill Murray, Dominion's senior vice president of communications. "Their leadership has provided an example for others, and their contributions have left positive and lasting impacts on society."

As part of the award, Dr. Johnson along with the other honorees will have a free-standing, two-sided pull-up banner unit, which will include her photo and background. The banners will be part of a traveling exhibition, which will be displayed at libraries throughout Virginia.

Instituted in 2013, the Strong Men & Women in Virginia History award endeavors to showcase "powerful examples of individuals who refused to be defined by their circumstance" and shine a bright light on African Americans whose contributions to recorded history has been "ignored, obscured, or underappreciated." Each year, the award



Photo Credit: NASA

is presented to individuals, who demonstrate how African Americans, through education and advocacy, actively campaigned to seek better lives for themselves and all Americans.

This award is designed to be presented in conjunction with Dominion's Strong Men & Woman: Excellence in Leadership series and the Library of Virginia's African American Trailblazers in History program, along with a student writing contest with awards for students and their schools.

Dr. Johnson came to Goddard from the White House Office of Science and Technology Policy, where from 2008 to 2010, she served under the President's science adviser as the executive director of the National Science and Technology Council.

In her role, Dr. Johnson was responsible for ensuring the establishment of clear national goals for federal science and technology investments in a broad array of areas across the executive branch, including basic science, technology, energy, environment, natural resources, and homeland and national security.

THE STRATEGIC PARTNERSHIPS OFFICE PRESENTS

INNOVATOR HOUR

Have questions about protecting your innovation?

Want to learn more about how to submit New Technology Reports?

Have general questions about technology transfer and partnerships?

SPO can help!

Sign up for a one-on-one 20-minute timeslot with a SPO representative.

Meetings will be held virtually via Microsoft Teams

NEXT SESSION: **TUESDAY, JULY 12, 2022**
1:00-2:00 P.M.

Available Timeslots

1:00-1:20 P.M.

1:20-1:40 P.M.

1:40-2:00 P.M.

How to Sign Up

To register for the upcoming session and secure your timeslot,
[complete the registration form.](#)



Photo Credit: Doug Scott / N4 Solutions

Rediscovering the Forgotten Moon Tree at Goddard

For those of you old enough to remember, Apollo 14 was the third spacecraft to land on the Moon. It was also the first mission to produce color television images from the lunar surface, and the only mission in which golf was played on the Moon.

But Apollo 14 is probably best remembered at Goddard for bringing back seeds for the so-called Moon Trees. Never heard of it, and don't know that one of those Moon Trees was planted and still growing right here at Goddard? You are not alone.

In February 1971, while astronauts Alan Shepard and Edgar Mitchell walked on the lunar surface, Stuart Roosa, a former U.S. Forest Service (USFS) smoke jumper, was orbiting the Moon in the

command module, "Kitty Hawk." Stowed away in his personal kit were approximately 2,000 seedlings from sycamores, redwoods, loblolly pines, Douglas firs, and sweetgum trees, which flew around the Moon.

Part of a joint NASA/USFS project, the experiment was designed to take seeds germinated by the USFS, fly them in weightless conditions around the Moon, and then plant them alongside their Earth-bound counterparts throughout the U.S. to see if they developed any differently.

Seedlings from the Moon Trees were planted at most NASA Centers throughout the U.S., and the sycamore seeds Goddard received were planted in front of the Visitor's Center on June 9, 1977. The

Goddard Moon Tree is the only Moon Tree planted at a NASA facility that is still alive – and still growing – today.

“I am sorry to say that the Moon Trees are not growing tentacles, glowing in the dark, and don’t give you an electric shock if you touch them,” laughed Dave Williams, NASA space science data archivist at Goddard and the unofficial historian and archivist of the Moon Trees. “There is nothing strange about the Moon Trees. I think what is intriguing to people is that it is like any other tree, but actually this tree has been to the Moon and you haven’t.”

“But what is also really neat about it is the fact that you can walk right up and touch it, and it has this connection to the Apollo program, which of course, is an iconic moment in history [of man landing on the Moon] that everyone refers to all of the time.”

After the successful return to Earth of Apollo 14, NASA/USFS gave seedlings not only to the NASA Centers but to governors in most states. They were planted at botanical gardens, state capitols, museums, parks, courthouses, and even at some elementary schools. In fact, seedlings from a loblolly pine, which later died, were planted at the White House.

Unfortunately, NASA did not keep any official records on where the Apollo 14 seedlings ended up being planted. Nor did the agency keep a record of what happened to any of those Moon Trees, and over time, most of these trees have died or become forgotten. NASA also never did a serious study of Moon Trees.

“The only surprising result,” noted Williams, “occurred when two seeds grew into two completely different species – a result of a gardening mix-up, not weird effects of microgravity.”

Using seed pods from the Goddard sycamore tree at the Visitor’s Center, several second-generation Moon Trees have been planted and grown on center. Goddard Archivist Christine Lane grew and planted second generation trees at the Center last year in honor of Apollo 14’s 50th anniversary. You can find them located outside Building 7 and Building 21. After Stuart Roosa passed away in 1994, his daughter, Rosemary, started a Moon Tree Founda-

tion in his honor, planting and tracking second-generation Moon Trees throughout the U.S. and Europe.

Even though it was not part of his job, Williams, after getting a letter from a third-grade schoolteacher in Indiana in 1996 about a Moon Tree that was believed planted in their community, began chronicling where all these Moon Trees were planted in the 1970s. To date, he has tracked about 100 in the U.S. – and even a couple in Brazil and France. Williams believes that there are still undiscovered Moon Trees out there.

“What the Moon Tree represents to the folks at Goddard is a really nice connection between the high-tech space work being done today on center and Apollo missions over 50 years ago,” Williams says. “This tree was planted from seedlings that orbited around the Moon. It’s a living monument to the era when mankind first escaped Earth’s gravity and felt another.”



Photo Credit: Doug Scott / N4 Solutions

Is it Time to Disclose Your NTR Now?

Did you know, if you are an engineer or scientist working on government-funded research for a new invention and/or technology through the Internal Research and Development (IRAD) program, the federal government—through the Bayh-Dole Act —allows federal agencies including NASA to grant you an exclusive license?

In a nutshell, the Bayh-Dole Act is federal legislation that permits ownership and licensing of an invention arising from government-sponsored research. This highlights the importance of, you, as the inventor working on an IRAD-funded project, remembering to file your New Technology Report (NTR) in a timely manner. The NTR is a document that you submit through the NASA's New Technology Reporting System at <http://invention.nasa.gov>. This creates a record of each of your innovations made at Goddard.

"You may not know it, but if you developed an innovation through IRAD on campus, an NTR is required," says Josh Levine, technology manager at Goddard's SPO. "People file their NTR and that is great, but not everyone does it. I would then like to put forth the value of the NTR, because it is like the nexus of a lot of different activities that you can do with your technology."

Levine says there are number of important benefits for inventors who file timely NTRs. One is that the inventor may get a patent and license their technology sooner. Two, SPO can help inventors develop one or more strategic partnerships with outside entities.

"Even before you submit your NTR, you can come to SPO and see if there are appropriate, external companies that you can work with," said Levine. "Another advantage of working with SPO is, when the IRAD money is gone, there might be some other partnership opportunities available for you [to help with continued funding]. We can help arrange a partnership and inventors can continue further development."

While it is best to file an NTR as early as possible to get the most benefit and avoid intellectual property

concerns that may arise if inventors delay (See Bryan Geurts Q&A, page 2), there's no time like the present. "No matter which phase you are in development, it is still important to file your NTR," Levine says.

Test Your Knowledge of When to File an NTR

TRUE or FALSE

Goddard inventors should not submit an NTR if their innovation is in the conceptional phase.

FALSE

An inventor should submit an NTR as soon as possible after conceiving of an idea to provide optimal opportunity for SPO to work with the Office of Patent Council (OPC) to protect new inventions.

Goddard inventors do not need to submit NTRs related to software.

FALSE

Software development is a core competency for Goddard and an NTR is required with each version change and is the first step in NASA's software release process.

Innovators should not submit an NTR if they question the commercial viability or patentability of an invention.

FALSE

Innovators should submit an NTR for any innovation. SPO and OPC will evaluate the invention for commercial potential and patentability.

A Goddard patent can only be licensed to a single company.

FALSE

A single patent can be licensed to multiple companies for multiple uses (unless it is an exclusive license.) SPO has experts who can assist with various licensing strategies.

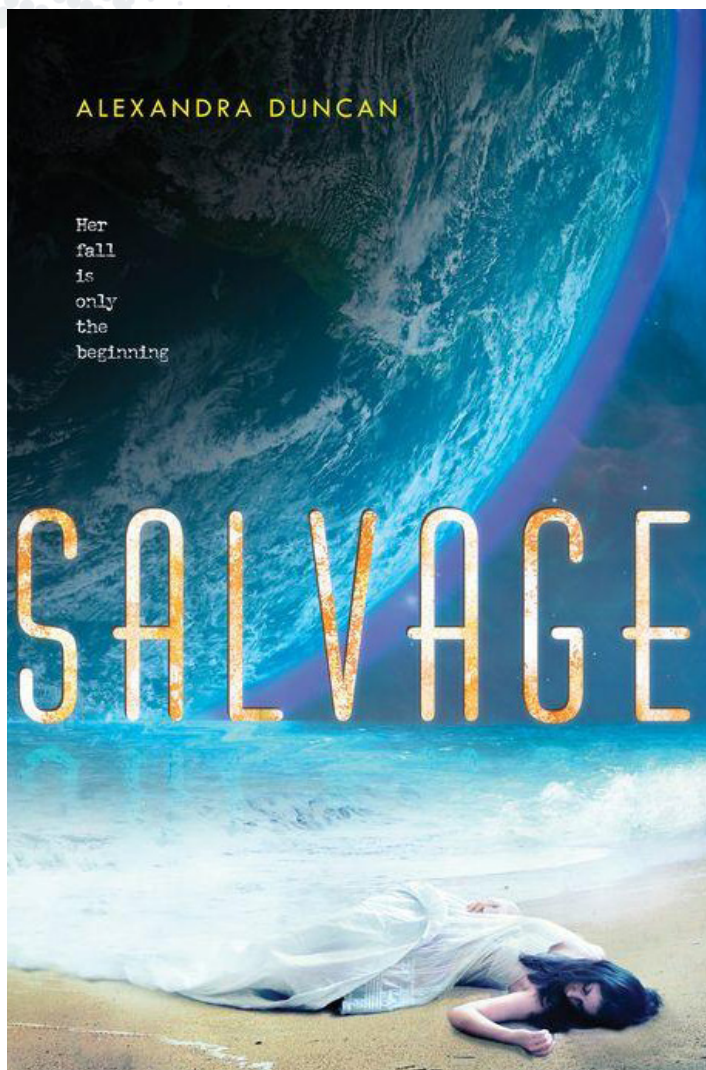
All inventions developed for Goddard by government employees or contractors require disclosure by submitting an NTR in accordance with NASA policy.

TRUE

Good, now you got it. How did you score?

To file an NTR, go to <http://invention.nasa.gov>. Filing an NTR is self-explanatory, and the web page will provide the step-by-step process.

THE LITERARY X-CHANGE BOOK OF THE MONTH



Ava is the captain's daughter. This allows her limited freedom and a certain status in the Parastrata's rigid society—but it doesn't mean she can read or write or even withstand the forces of gravity. When Ava learns she is to be traded in marriage to another merchant ship, she hopes for the best. After all, she is the captain's daughter. But instead, betrayal, banishment, and a brush with love and death are her destiny, and Ava stows away on a mail sloop bound for Earth to escape both her past and her future. Gravity almost kills her. Gradually recuperating in a stranger's floating cabin on the Gyre, a huge mass of scrap and garbage in the Pacific Ocean, Ava begins to learn the true meaning of family and home and trust—and she begins to nourish her own strength and soul. This sweeping and harrowing novel explores themes of choice, agency, rebellion, and family, and after a tidal wave destroys the Gyre and all those who live there, ultimately sends its main character on a thrilling journey to Mumbai, the beating heart of Alexandra Duncan's post-climate change Earth. An Andre Norton Award nominee.

(Publisher's Summary)

This thrilling, surprising, and thought-provoking debut novel will appeal to fans of *Across the Universe*, by Beth Revis, and *The Handmaid's Tale*, by Margaret Atwood.

WHAT IS THE LITERARY X-CHANGE?

In 2021, the Strategic Partnerships Office (SPO) launched a community library with a little help from Tor Books. Goddard has partnered for years with Tor, a leading publisher of science fiction, by connecting them with subject matter experts to promote the science in "science fiction." Located in the lobby of Building 22, The Literary X-Change is available to the entire Goddard community. Here's how it works:

TAKE ONE

If a book strikes your fancy take it. Read it, enjoy it, and—when you're done—share it with a friend or bring it back to the X-Change.

GIVE ONE

Everyone can pitch in to keep the library stocked. Bring books you'd like to share with the Goddard community when you can and continue being a friend of The Literary X-Change!